IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A fuel cell system having: a fuel cell [[(1)]] generating power as a result of chemical reactions between supplied gases, wherein a coolant flows in the fuel cell and undergoes a temperature increase as a result of absorbing waste heat produced by power generation in the fuel cell; a water tank [[(31)]]; a humidifying device [[(34)]] for humidifying at least one supplied gas by using water from the water tank [[(31)]]; and a coolant temperature regulation device for regulating a temperature of the coolant flowing inside the fuel cell [[(1)]] so as to control the temperature of the fuel cell [[(1)]];

the fuel cell system comprising:

a defrosting device [[(61)]] for melting ice in the water tank by applying heat of the coolant to the water tank [[(31)]];

a coolant recirculation passage ~~(22, 25, 95)~~ for allowing a recirculation of the coolant through the defrosting device [[(61)]] and the fuel cell [[(1)]];

a flow generator [[(21)]] for generating a flow of the coolant from the fuel cell [[(1)]] to the defrosting device [[(61)]]; and

a controller [[(51)]] for controlling a startup operation of the fuel cell system, the controller having the function of controlling the flow generator [[(21)]] to generate a flow of coolant from the fuel cell [[(1)]] to the defrosting device [[(61)]] so as to melt ice in the water tank [[(31)]] while the startup operation of the fuel cell system.

2. (Currently Amended) The fuel cell system as defined by Claim 1, wherein the defrosting device [[(61)]] is disposed in the water tank [[(31)]] and comprises a heat exchanger [[(61)]] allowing heat exchange between the coolant and ice in the water tank [[(31)]].

3. (Currently Amended) The fuel cell system as defined by Claim 2, further comprising a heater [[(65)]] for heating the coolant discharged from the defrosting device [[(61]].

4. (Currently Amended) The fuel cell system as defined by Claim 3, further comprising a temperature sensor [[(83)]] for detecting a temperature of the coolant;

wherein the coolant temperature regulation device comprises:

a radiator [[(26)]] provided on the coolant recirculation passage;

a first bypass passage [[(27)]] branching from the coolant recirculation passage and bypassing the radiator [[(26)]], the heater [[(65)]] being disposed in the first bypass passage [[(27)]]; and

a passage switching device [[(28)]] for selectively switching the passage for the coolant between a passage passing through the radiator [[(26)]] and a passage passing through the first bypass passage [[(27)]];

and wherein the controller further functions to control the passage switching device [[(28)]] in response to a detected temperature of the coolant so as to regulate the temperature of the coolant.

5. (Currently Amended) The fuel cell system as defined by Claim 4, wherein the water tank [[(31)]] is disposed in the coolant recirculation passage upstream of the position at which the first bypass passage [[(27)]] branches from the recirculation passage.

6. (Currently Amended) The fuel cell system as defined by Claim 3, further comprising a temperature sensor [[(83)]] for detecting a temperature of the fuel cell [[(1)]];

wherein the controller further functions to compare the detected temperature of the fuel cell [[(1)]] with freezing point of water; operate the heater [[(65)]] when the detected temperature of the fuel cell [[(1)]] is less than freezing point; and stop the operation of the heater [[(65)]] when the detected temperature of the fuel cell [[(1)]] is greater than or equal to freezing point.

7. (Currently Amended) The fuel cell system as defined by Claim 2, further comprising:

a second bypass passage [[(91)]] branching upstream of the water tank [[(31)]] and bypassing the water tank [[(31)]]; and

a passage switching device [[(92)]] for switching the passage for the coolant between a passage passing through the heat exchanger [[(61)]] in the water tank [[(31)]] and a passage passing through a second bypass passage.

8. (Currently Amended) The fuel cell system as defined by Claim 7, further comprising a temperature sensor [[(83)]] for detecting a temperature of the fuel cell [[(1)]],

wherein the controller [[(51)]] further functions to compare the detected temperature of the fuel cell [[(1)]] with freezing point of water; control the passage switching device [[(92)]] so that the coolant flows through the second bypass passage when the detected temperature of the fuel cell [[(1)]] is less than freezing point; and control the passage switching device [[(92)]] so that the coolant flows through the heat exchanger in the water tank when the detected temperature of the fuel cell [[(1)]] is greater than or equal to freezing point.

9. (Currently Amended) A fuel cell system having: a fuel cell [[(1)]] generating power as a result of chemical reactions between supplied gases, wherein a coolant flows in the fuel cell and undergoes a temperature increase as a result of absorbing waste heat produced by power generation in the fuel cell; a water tank [[(31)]]; a humidifying device [[(34)]] for humidifying at least one supplied gas by using water from the water tank [[(31)]]; and a coolant temperature regulation device for regulating a temperature of the coolant flowing inside the fuel cell [[(1)]] so as to control the temperature of the fuel cell[[(1)]] ;

the fuel cell system comprising:

a defrosting means [[(61)]] for melting ice in the water tank by applying heat of the coolant to the water tank [[(31)]];

a coolant recirculation passage means ~~(22, 25, 95)~~ for allowing a recirculation of the coolant through the defrosting means [[(61)]] and the fuel cell[[(1)]] ;

a flow generating means [[(21)]] for generating a flow of the coolant from the fuel cell [[(1)]] to the defrosting means [[(61)]]; and

a control means [[(51)]] for controlling the flow generator [[(21)]] to generate a flow of coolant from the fuel cell [[(1)]] to the defrosting means [[(61)]] so as to melt ice in the water tank [[(31)]] while a startup operation of the fuel cell system.

10. (Currently Amended) A control method for controlling a fuel cell system, the fuel cell system having: a fuel cell [[(1)]] generating power as a result of chemical reactions between supplied gases, wherein a coolant flows in the fuel cell and undergoes a temperature increase as a result of absorbing waste heat produced by power generation in the fuel cell; a water tank [[(31)]]; a humidifying device [[(34)]] for humidifying at least one supplied gas by using water from the water tank [[(31)]]; and a coolant temperature regulation device for regulating a temperature of the coolant flowing inside the fuel cell [[(1)]] so as to control the temperature of the fuel cell [[(1)]];

the control method comprising the steps of:

providing a defrosting device [[(61)]] for melting ice in the water tank by applying heat of the coolant to the water tank [[(31)]];

providing a coolant recirculation passage ~~(22, 25, 95)~~ for allowing a recirculation of the coolant through the defrosting device [[(61)]] and the fuel cell [[(1)]]; and

generating a flow of coolant from the fuel cell [[(1)]] to the defrosting device [[(61)]] so as to melt ice in the water tank [[(31)]] while a startup operation of the fuel cell system.